NOVEL METHODS OF CONSTRUCTING LIBRARIES OF GENETIC PACKAGES THAT COLLECTIVELY DISPLAY THE MEMBERS OF A DIVERSE FAMILY OF PEPTIDES, POLYPEPTIDES OR PROTEINS

The present invention relates to constructing libraries of genetic packages that display a member of a diverse family of peptides, polypeptides or proteins and collectively display at least a portion of the diversity of the family. In a preferred embodiment, the displayed polypeptides are human Fabs.

More specifically, the invention is directed to the methods of cleaving single-stranded nucleic acids at chosen locations, the cleaved nucleic acids encoding, at least in part, the peptides, polypeptides or proteins displayed on the genetic packages of the libraries of the invention. In a preferred embodiment, the genetic packages are filamentous phage or phagemids.

The present invention further relates to methods of screening the libraries of genetic packages

20 that display useful peptides, polypeptides and proteins and to the peptides, polypeptides and proteins identified by such screening.